

TASK ORDER #1

PAWSS BASELINE SYSTEM IMPLEMENTATION TO
SUPPORT DSC/AIS EVALUATION AT GRETNA LIGHT

in

New Orleans, LA

PRELIMINARY

25 August 1997

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1.0 SCOPE OF TASK ORDER (T.O.#1)

The System Integration Contractor (SIC) shall install their DSC/AIS Baseline System architecture for a single workstation at Gretna Light in New Orleans. The purpose of this installation is to:

- (1) Test the ability of the DSC/AIS Baseline System to meet the draft IMO NAV 43 Performance Standards while accommodating a large number of DSC/AIS contacts (up to 100) in a ship-to-shore mode
- (2) Test the ship-to-ship information exchange
- (3) Gather data to assist the Program Sponsor to determine staffing standards for this new mode of VTS/AIS watchstanding

The Coast Guard will upgrade the VHF communications along the river to Digital Selective Calling (DSC) with AIS (referred to as DSC/AIS). The Coast Guard will provide up to 100 transponders to place onboard vessels to perform the DSC/AIS tests.

2.0 APPLICABLE DOCUMENTS AND CLINS

A list of the documents referenced in this Task Order is presented below. Compliance with these documents is required to the degree specified within this Task Order or the Statement of Work (SOW).

2.1 COAST GUARD DOCUMENTS

No Number	Statement of Work for the PAWSS Project's System Integration Contractor	7 August 1997
No Number	PAWSS Project Configuration Management Plan (CMP)	18 July 1997
No Number	System Specification for the Ports and Waterways Safety System	2 June 1997
1721798	System Interface Design Document for the Surface Search Radar Program	1 July 1997
TBD	Interface Requirements Specification for the Surface Search Radar	TBD
TBD	Radar Data Service Communication User Manual for the Surface Search Radar Program	1 July 1997
TBD	Interface Control Document for Voice and Data Communications to PAWSS Baseline System at the Gretna Light Facility	TBD
TBD	Test Plan for DSC/AIS Evaluation	TBD

2.2 NON-GOVERNMENT DOCUMENTS

ISO 9000 or its commercial equivalent	Quality Management and Quality Assurance Standards	1991
ITU-R M825.3 Recommendation	DSC Shipboard Transponder Standard (with ship-to-ship and broadcast mode options incorporated)	TBD

2.3 APPLICABLE CLINS

CLIN 001	System Implementation at the Gretna Light Facility (includes the cost of the replacement radar)
CLIN 003	Facilities Modifications at Gretna Light
CLIN 004	Support at the Gretna Light Facility

3.0 TECHNICAL DESCRIPTION OF WORK

This section describes the requirements the SIC shall meet in designing and installing a baseline system in the Gretna Light Facility for the purpose of providing equipment for the Coast Guard to evaluate the operation of DSC/AIS equipment installed on cooperative vessels and interacting with the installed system. SOW references are included in all subtasks. References to SOW paragraphs include all subparagraphs unless otherwise stated.

3.1 PERIOD OF PERFORMANCE

<u>CLIN</u>	<u>Period of Performance</u>	<u>Duration of Performance</u>
001	T.O. award through system limited DT&E completion	4 months
004	System DT&E completion until equipment is moved to the VTS (under T.O.#3)	4 months (allow 2 months for DSC/AIS testing plus transition time based on SIC's plan)

3.2 PLACE OF PERFORMANCE AND DELIVERY

All work on these CLINs shall be performed at the SIC's facility and at Gretna Light, New Orleans, LA. The DSC/AIS Baseline System shall be installed at the Gretna Light facility for limited DT&E tests by the SIC followed by DSC/AIS Evaluation Tests and use by the USCG.

3.3 GOVERNMENT FURNISHED ITEMS

When Req'd

3.3.1 Government Furnished Information (GFI)

Communication Sites Documentation and Drawings	At T.O. Award
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3.3.2 Government Furnished Property (GFP)

3.3.2.1 Gretna Light Facility

The Government will provide space in the Gretna light facility for installation of the system equipment necessary to conduct the DSC/AIS Baseline System tests. The Gretna Light property is described in Appendix A.	<u>When Req'd</u> At T.O. Award
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3.3.2.2 Communications Sites And Frequencies

The Coast Guard will provide the remote communications sites and the frequencies for use during the DSC/AIS tests.

When Req'd
7 DAC

3.3.3 Government Furnished Equipment (GFE)

3.3.3.1 VHF and DSC/AIS Radios

VHF radio equipment for contacting vessels during tests will be provided by the Coast Guard at the remote communications sites. The SIC shall use the maritime VHF-FM Channels of the Marine Radio Service for VTS operations. Radio equipment for monitoring Channel 70 for Digital Selective Calling and processing DSC/AIS information will also be provided by the Coast Guard unless the radio equipment is embedded in the workstation, in which case, the Contractor shall provide the radio equipment.

60 DAC

3.3.3.2 Optional Radar

If the option for this Task Order is exercised, the SIC shall install the Coast Guard provided SSR and Radar Data Processor at the Gretna Light facility.

90 DAC

3.4 COVERAGE AREAS FOR TEST IN THE PORT OF NEW ORLEANS

3.4.1 DSC/AIS and Radio Communications Area

The DSC/AIS and radio communications area for this test in the Port of New Orleans includes the navigable waters of the Mississippi River between the mouth of the river and Baton Rouge between the river levees. It also includes the riverside entrances to the locks. This area also contains critical anchorages, fleeting facilities, and river front terminals.

3.4.2 Radar Surveillance Area

The radar surveillance area covered by the radar supplied by the SIC (or the optional radar supplied by the Coast Guard and installed by the SIC, if the option is exercised), is from the Gretna Light installation along the line of sight over the water to the shoreline or obstruction to the line of sight.

3.5 WORK SUBTASKS

The work Subtasks the SIC shall perform under this Task Order shall be in accordance with the PAWSS Project Statement of Work and the System Specification.

This Task Order is divided into Subtasks that relate to CLINs 001, 003, and 004 as identified in the paragraph headings.

Coast Guard disapproval of any data delivery requires correction and resubmission by the SIC in accordance with the CDRL requirements.

3.5.1 Subtask 1--Project Management : CLIN 001

The SIC shall meet all of the requirements of paragraph 3.1.1 of the Statement of Work (SOW) including details added in the following paragraphs.

3.5.1.1 Project Management Planning

The SIC shall meet all of the requirements of paragraph 3.1.1.1 of the Statement of Work (SOW).

3.5.1.2 Project Management Reviews (PMR)

The SIC shall conduct PMRs on all active Task Orders in accordance with Paragraph 3.1.1.2 of the SOW. The SIC shall conduct the first project management review 30 days after award of this Task Order in conjunction with the Design Review (see paragraph 3.5.2.1) and as appropriate thereafter. The Contractor or Government shall schedule PMRs at least quarterly. They should coincide with major events in the progress of the Task Order. The Government and the SIC shall mutually agree to dates for reviews at least two weeks prior to the date of the meeting.

3.5.1.3 Monthly Progress Reports

The SIC shall submit Monthly Progress Reports in accordance with the SOW, paragraph 3.1.1.3.

3.5.2 Subtask 2--DSC/AIS Baseline System Design: CLIN 001

The SIC shall design a system in accordance with paragraphs 3.1.2 and 3.1.3 of the SOW, except for 3.1.3.1.3. The action to install the system shall be accomplished under subtasks 4 and 5 and not this subtask. The SIC shall select the appropriate portions of the proposed system, including at least one of each configuration item, and install a single workstation in the Gretna Light facility in NOLA to permit the Coast Guard to evaluate the performance of DSC/AIS for VTS use. The workstation and associated equipment shall meet the requirements of the PAWSS specification to accept both radar and DSC/AIS inputs, track, display, record/playback, and other features proposed for the baseline system.

The SIC shall initiate changes to the PAWSS System Design Baseline in accordance with the Government's Configuration Management System, where necessary, to include port or test-specific functions.

3.5.2.1 Design Review

The SIC shall conduct a DSC/AIS Baseline System design review in accordance with paragraph 3.1.5 of the SOW. Portions of the task described in paragraph 3.1.5 of the SOW (Governor Nicholls Light Facility modifications and the VTC build-out design are covered under a separate Task Order (Task Order #2). The purpose of the design review is to describe the modifications made to the "off-the-shelf" system to meet the DSC/AIS Baseline System requirements of this Task Order. This review shall include the presentation of drawings of the Gretna Light system proposed installation and the DSC/AIS Baseline System Description.

3.5.2.2 Limited DT&E Plans/Procedures

The SIC shall prepare test plans and procedures in accordance with paragraph 4.1.3 of the SOW, to show how the system will be demonstrated to be acceptable for Coast Guard DSC/AIS evaluation testing. The SIC shall also identify any special test equipment or consumables required for the tests.

The SIC shall review the Coast Guard's DSC/AIS evaluation procedures and comment on ways to use the SIC's system more efficiently, or to improve the evaluation procedures.

3.5.3 Subtask 3--System Software Adaptation: CLIN 001

The SIC shall offer test specific changes to the DSC/AIS Baseline System as defined in the negotiated contract. The changes shall be submitted for Government in accordance with paragraphs 3.2.2.5 and 3.2.2.7 of the SOW

3.5.4 Subtask 4--System Installation: CLIN 001

The SIC shall implement the DSC/AIS Baseline System (including the replacement radar) in the Gretna Light facility in accordance with paragraph 3.1.3 of the SOW and as defined in Subtasks 2 and 3 of this Task Order.

The SIC shall not interfere with the Traffic Light Operator or impede his view of the waterway during installation of the equipment in the Gretna Light facility. Operation of the radar may be interrupted for short periods provided the consent of the traffic light operator is requested and granted.

3.5.5 Subtask 5--Radar Installation: CLINs 001 and 003

The SIC shall meet all of the requirements of paragraph 3.1.3.1.3 and 3.1.3.2 of the SOW. The SIC shall provide a radar, antenna, and radar data processor (target extractor) that meets PAWSS VTS System requirements to replace the existing Gretna Light radar. The SIC may use the existing radar tower for mounting the SIC provided radar equipment.

The USCG may provide a Surface Search Radar (SSR) and Radar Data Processor. The SIC shall determine if the SSR will meet PAWSS VTS System and schedule requirements (see paragraph 2.1 for list of SSR interface documents). The Coast Guard will make the final decision to use the SIC proposed radar or the SSR.

3.5.6 Subtask 6--System Limited DT&E Testing: CLIN 001

The SIC shall certify the system and perform limited DT&E testing in accordance with paragraphs 4.1.2 and 4.1.3 of the SOW. The SIC shall provide electronic charts of the VTSA for use in the workstation provided at the Gretna Light Facility.

Prior to commencing Limited DT&E Tests, the SIC shall load any Coast Guard provided adaptation data into the system. This data shall include, but not be limited to the data on vessels that frequent the port, vessels that will be involved in the tests, and other data as approved by the Coast Guard during the DSC/AIS Baseline System Design Review.

The SIC shall test the system to demonstrate that the system is capable of receiving both radar and DSC/AIS reports and tracking them under varying loads. Any additional functions necessary to identify the targets and tracks, to demonstrate the necessary data entry functions, or other functions of the SIC DSC/AIS Baseline System, and to record and playback the communications and target or track data shall also be demonstrated. Simulators may be provided by the SIC to supplement the loading of the system. The Coast Guard is providing DSC/AIS transponders for vessels to participate in the test, but to demonstrate operation under full load, it may be necessary to simulate transponder messages. Following the tests the SIC shall document the results of the test.

**3.5.7 Subtask 7--Support of DSC/AIS Evaluation Testing
(Maintenance and Training): CLIN 004**

Following successful completion of the Limited DT&E tests, the SIC shall support the Coast Guard by operating and maintaining the system during the Coast Guard DSC/AIS Baseline System

Evaluation Tests in accordance with paragraph 3.1.6 of the SOW. These tests shall include both ship-to-shore and ship-to-ship tests. These tests may continue until the system is moved to the VTC.

During the period that the SIC is supporting USCG DSC/AIS Baseline System Evaluation Testing, the SIC shall provide on-the-job training to Coast Guard personnel to be used as Watchstanders following completion of the DSC/AIS testing, in accordance with paragraph 3.1.6 of the SOW. Any SIC format training materials necessary to assist the Coast Guard Watchstanders in operating the DSC/AIS Baseline System shall be provided.

The Contractor shall work with the Coast Guard in an Integrated Product Team (IPT) to develop the display screens that the Watchstanders would prefer on their workstations. This work may proceed during the time of the DSC/AIS evaluation and until the system is moved to the VTC as scheduled in the SIC's transition plan (see subtask 9).

3.5.8 Subtask 8--Planning for VTC Transition: CLIN 001

The SIC shall plan for the installation of the DSC/AIS Baseline System capability into the NOLA VTC in accordance with paragraph 3.1.7 of the SOW. The Baseline System Transition Plan shall show how this will be accomplished while minimizing the amount of duplicate equipment necessary to permit the evaluation operations to continue from either the VTC or Gretna Light. In addition, remote control of the two traffic lights must also be provided.

4.0 QUALITY ASSURANCE REQUIREMENTS

The SIC shall implement, manage, and maintain a Quality Program in accordance with paragraph 4.1 of the SOW.

APPENDIX A: GREтна LIGHT SITE DESCRIPTION

Add USCG provided Gretna Light Layout and documentation here in place of this general description.

The Government will provide space in the Gretna Light facility for installation of the system equipment necessary to conduct the DSC/AIS/radar tests. This facility has a space approximately 5 feet by 2 feet available on a 30 inch high table for installing the necessary display and operator interface equipment. Any processors necessary can be installed beneath the table or against a wall in a space 2 feet by 3 feet and 7 feet high. Both 120 and 240 volt commercial power are available and outlets are provided. Should additional space be required, a small equipment hut may be installed by the SIC below the facility housing the operators. A window air conditioner is provided to control the temperature in the present operator room. The operator room is approximately 10 feet by 12 feet by 8 feet high.

APPENDIX B: COMMUNICATIONS SITES DOCUMENTATION

To be supplied

APPENDIX C: ACRONYMS

AIS Automatic Identification System

CDRL Contract Data Requirements List

CI Configuration Item

CLIN Contract Line Item Number

CMP Configuration Management Plan

COTS Commercial Off-The-Shelf

CSCI Computer Software Configuration Item

DAC Days After Contract

DSC Digital Select Calling

DT&E Developmental Test and Evaluation

FM Frequency Modulation

GFE Government Furnished Equipment

GFI Government Furnished Information

GFP Government Furnished Property

HWCI Hardware Configuration Item

ICD Interface Control Document

LA Louisiana

NOLA New Orleans, Louisiana

PAWSS Ports and Waterways Safety System

PMR Project Management Review

SIC System Integration Contractor

SOW Statement Of Work

SSR Surface Search Radar

TBD To Be Determined

T.O. Task Order

USCG U.S. Coast Guard

VHF Very High Frequency

VTC Vessel Traffic Center

VTs Vessel Traffic Service

VTSA Vessel Traffic Service Area